

Title (en)  
Optical amplifying fiber and process of producing the same

Title (de)  
Optisch verstärkende Faser und Verfahren zu ihrer Herstellung

Title (fr)  
Fibre d'amplification optique et méthode de sa fabrication

Publication  
**EP 0851544 A1 19980701 (EN)**

Application  
**EP 97305085 A 19970710**

Priority  
JP 35015696 A 19961227

Abstract (en)  
An optical amplifying fiber (65) including a clad (34), a first core (36) provided inside the clad and containing Ge, a second core (38) provided inside the first core and containing Er and Al, and a third core (40) provided inside the second core and containing Ge. The second core (38) has a refractive index higher than that of the clad (34), and the first and third cores (36,40) have refractive indexes each of which is higher than that of the second core. Since the third core (40) having the high refractive index is provided at a central portion, it is possible to make smaller a mode field diameter and hence to improve a conversation efficiency of pumping light into signal light. Further, since the second core (38) contains Al as an amplification band width increasing element, it is possible to sufficiently ensure a wide amplification band width. <IMAGE>

IPC 1-7  
**H01S 3/06**; **G02B 6/22**; **C03C 13/04**; **C03B 37/018**

IPC 8 full level  
**G02B 6/036** (2006.01); **C03B 37/012** (2006.01); **C03B 37/018** (2006.01); **C03C 13/04** (2006.01); **H01S 3/06** (2006.01); **H01S 3/067** (2006.01); **H01S 3/10** (2006.01)

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Citation (search report)  
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